

ENVIRONMENTAL ASSESSMENT

China Garden Right-of-Way and Road Construction

EA# OR-117-08-04

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT
GRANTS PASS RESOURCE AREA

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT

EA COVER SHEET

RESOURCE AREA: Grants Pass EA # OR-117-08-04
ACTION/TITLE: China Garden Right-of-Way and Road Construction
LOCATION: T40S, R7W, Section 13 Willamette Meridian, Josephine Co.,
Oregon.

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ENVIRONMENTAL ASSESSMENT
China Garden Amendment Application and Road Construction Project

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1.0 Introduction

This environmental assessment (EA) will assist in the decision making process by assessing the environmental and human affects resulting from implementing the proposed project or alternatives. It will assist in the decision making process by assessing the environmental and human effects resulting from implementing the proposed project or alternatives. This EA will also assist in determining if an environmental impact statement (EIS) needs to be prepared or if a finding of no significant impact (FONSI) is appropriate.

This EA tiers to or is consistent with the following documents:

1. *Final EIS/ROD for the Medford District Resource Management Plan (RMP) (1995)*
2. *Final Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl (1994)*
3. *ROD for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and its attachment A, Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (NWFP) (1994).*
4. *Final Supplemental EIS (2000) and ROD (2001) for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines*
5. *Record of Decision To Remove the Survey and Manage Mitigation Measure Standards and Guidelines from Bureau of Land Management Resource Management Plans Within the Range of the northern Spotted Owl (2007).*
6. *ROD and Resource Plan Amendment for Management of Port-Orford-Cedar in Southwest Oregon, Coos Bay, Medford, and Roseburg Districts (2004) and the Final Supplemental EIS for the Management of Port-Orford-Cedar in Southwest Oregon (2004)*
7. *Medford District Noxious Weed Environmental Assessment (1998).*

In addition to the documents cited above, project planning drew from information and recommendations from the following:

- (1) *Sucker Creek Watershed Analysis (January 2007).*

1.1 Purpose of and Need for Action

Indian Hill, LLC has applied to amend their O & C Logging Road Right-of-Way (Permit Number M-1166) agreement with the Bureau of Land Management (BLM). The application included building an extension (430 feet) to an existing road across BLM lands in T40S, R7W, Section 13 NE ¼ NE ¼ and adding an existing road to their agreement.

The Medford District Resource Management Plan (RMP) (p. 82) directs the BLM to make lands available for needed right-of-ways. Indian Hill requested the amendment to improve access to their property for future management. The EA will assist in the decision to accept or reject Indian Hill's request for right-of-way (ROW) access and road construction to access their property.

1.2 Decision Factors

In choosing whether or not to issue a Right-of-Way (ROW) and authorize road construction, the Grants Pass Field Manager would evaluate Indian Hill, LLC's proposal on:

- Potential significant environmental effects
- Consistency with the Medford District Resource Management Plan

Project Location and Land Use Allocation

The project is in T40S, R7W, section 13 approximately ten miles east of Cave Junction (Appendix A Map 1). The project is in the Southern General Forest Management Area land allocation and lies within a key watershed.

1.3 Issues

A variety of issues and concerns were raised during project scoping by interested individuals or groups outside the BLM and by BLM's interdisciplinary team. In this EA, an issue is something unique to the project area that may need particular consideration and which may contribute to defining a particular action alternative. Issues include:

- Loss of habitat due to vegetation clearing for road construction
- Increase of roads in a key watershed
- Possible noxious weed transport from heavy equipment operation
- Sedimentation and Aquatic Habitat

1.3.1 Issues Considered but eliminated

- **OHV use** – The project would not change access or available areas for OHV use. The road is currently barricaded and would be following project implementation. No OHV use has been observed in project area.
- **Archeology** – BLM performed a section 106 National Historic Preservation Act cultural

resource survey on the proposed Indian Hill ROW located in T40-7W-13. No cultural resources were found within the proposed project area.

- **Port-Orford-Cedar (POC) disease** – Following the POC disease risk analysis, risk was deemed low due to no POC in project area. Further, project design features of dry season operation and washing vehicles would effectively prevent spread of disease.

2.0 Proposed Action and Alternatives

The decision to be made is whether to grant Indian Hill, LLC request for a right of way and road construction. Therefore, this section presents two alternatives — The No Action, which would deny the request, and the proposed action. Alternatives to the proposed action that were considered but eliminated from detailed analysis are discussed below.

2.1 Alternative 1: No Action

The no action alternative is defined as not implementing the proposed action, thus denying Indian Hill's application. This would deny Indian Hill permission to construct a road on BLM land and use certain existing BLM roads to access their property.

Inclusion of this alternative is done without regard to whether or not it is consistent with the RMP. The no action alternative assumes a continuation of current environmental conditions and trends.

2.2 Alternative 2: Proposed Action

The proposed action is to amend Indian Hill's reciprocal ROW permit to: a) Include existing Road 40-7-13.02, (~1500 feet) into their road right-of-way permit; b) construct approximately 430' of road across BLM, extending from existing Road 40-7-13.02 to Indian Hill's property line (Appendix A, map). The right-of-ways would be added to Schedule 1 of permit M-1166 in perpetuity.

The road would have a running width of 14' and a 45' foot clearing width. Road bed would be sloped with a 3% grade for drainage. The right-of-way would be 50' wide with a native surface road bed. Maximum road grade would be 12%.

Backslope would not be steeper than 3/4:1 (run to rise) and fillslopes would be 1 1/2:1. The first 150' of the road would be constructed without filling (full bench construction) with an insloped road prism and a 1' deep inside ditch (shaped 2:1). Ditch relief culverts (18" diameter) would be installed in such a manner to reduce surface water volume and velocities. Riprap energy dissipaters would be installed at culvert cross drain outlets. Subsurface drains would be installed if subsurface water is encountered. Embankments would be layer placed with roller compaction and sidecasting would be avoided. Depending on the strength of road foundation the road could be spot rocked with hard durable aggregate meeting BLM gradations for 1 minus to 1 1/2 minus.

The road would run through a previously managed stand. The stand is brushy with hardwood species (Pacific yew, big leaf maple, vine maple, canyon liveoak, tanoak, chinquapin) and containing few trees (~16). Less than 5 trees greater than 18" may be removed.

2.2.1 Alternatives considered but eliminated

Helicopter access: Indian Hill determined that helicopters could be used to access their property. However, at this time and anticipated future fuel use and cost, access via helicopter was deemed cost prohibitive.

Access via Sucker Creek: An old road (SE 1/4 section 12) following Sucker Creek and an unnamed tributary leads to Indian Hill's property in section 13. This access option was dropped due to the high maintenance needs and close proximity to riparian areas and streams.

2.3 Project Design Features

The following project design features (PDFs), based on BLM's best management practices, would help prevent potential adverse project impacts. The PDFs are applied to activities occurring on BLM managed lands.

- Road use would not occur when roads are wet enough to incur rutting. Road use and construction would not occur when roads are wet or during the wet season (typically October 15-May 15).
- For the first 150 feet of new road construction rounding of the upper cutbank would be employed where there is deep (>40 inches) soil and observable moisture content
- Slash created during clearing activities would be placed in a wind row below the road within the ROW in order to help capture road related sediment.
- Snags felled for safety reasons or that are within the proposed ROW would be left on site.
- No blasting of more than 2lbs of explosives between March 1 and June 30 to avoid disturbance to nesting spotted owls.
- Construction equipment would be confined to roadway construction limits.
- Cultural surveys have revealed no sites. If cultural sites are found during project implementation, activities around the site would halt until a BLM archaeologist reviewed the site and determined appropriate protection measures.
- Equipment would be cleaned to prevent weed transport. Native seed and mulch would be weed free.
- Surface drainage and erosion control devices would be installed prior to fall rains. Fillslopes would be seeded and mulched using native grass seed and certified weed free

straw.

- Heavy equipment would be clean and free of leaks before any use. Spill containment materials would be kept on site at all times. Equipment refueling would not occur within 150' of streams.
- Road would be barricaded to discourage vehicular use.
- Prior to moving in construction equipment on site, spot rock would be placed 50' each side of the culvert crossing at MP 0.1 of Road 40-7-13.02A. Spot rock would be hard durable crushed aggregate placed at 4 inch depth and would meet BLM gradations for 1 minus to 1 ½ minus.
- Equipment washing would be done prior to beginning work to prevent POC disease. Washing will be done with Clorox bleach at 1 gallon bleach to 1,000 gallons of water from an uninfested water source. Washing will be required during summer rain events.

3.0 Environmental Consequences

Only substantive site specific environmental changes caused by implementing the proposed action are discussed in this chapter. If an ecological component is not discussed, it should be assumed that the resource specialists have considered effects to that component and found that the proposed action or alternatives would have minimal or no effects. In addition, unless addressed specifically, the following were found to be unaffected by the proposed action or alternatives: air quality, areas of critical environmental concern (ACECs), cultural and historical resources, Native American religious sites, recreation, prime or unique farmlands, floodplains, wild and scenic rivers and wilderness areas.

Current conditions in the project area have resulted from natural events and human actions that have taken place over many decades. Cumulative effects are defined as the, "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" (40 CFR § 1508.7). A description of current conditions inherently includes the effects of past actions and serves as a more accurate and useful starting point for a cumulative effects analysis than by "adding up" the effects of individual past actions. "Generally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." (CEQ Memorandum 'Guidance on the Consideration of Past Actions in Cumulative Effects Analysis' June 24, 2005.)

The level of detail necessary to inform the decision maker and the public needs to be commensurate with context and intensity of the proposed activity. The project proposes to construct 430 feet of road totaling approximately 0.5 acres. At a running surface width of 14 feet, the project would create approximately 0.14 acres of compaction. The road does not cross any drainage, and therefore is disconnected to the stream network. The road lies in the Upper Sucker Creek key watershed.

The team determined that since ground disturbance was isolated to 430 feet of proposed road and does not cross a stream course, a detailed assessment of all roads in the 62,544 acre watershed was not necessary to determine the effects of the proposed road. Rather, the spatial scale for assessment focuses on section 13 and the Upper Sucker Creek key watershed. This scale was selected because: 1) The activity would be limited to .5 acres in the key watershed; 2) key watersheds were established to maintain or recover aquatic species; 3) the RMP directs a no net increase in road miles in key watersheds; and 4) future projects adjacent to the proposed road in section 13 may increase potential for effects. Therefore, the scale and intensity of disturbance and direction in the RMP for key watersheds drove the cumulative effects discussions. While section 13 and the key watershed is the focus, temporal and spatial scales may vary, depending on the resource being affected.

Watershed Overview/History

The following overview provides a context in which to analyze the effects of the China Garden Amendment proposal. This summary of the watershed and the future foreseeable actions provides a 'big picture' look at the watershed, puts the project into perspective, and allows for comparison of the action alternative with the no action alternative (existing conditions).

Fifth Field Watershed: The project would occur on matrix land allocation within the 62,544 acre Sucker Creek 5th field watershed. The project lies within the 26,210 acre Upper Sucker Creek key watershed.

The Pacific Northwest Forest Plan (1994) and the RMP directs that within key watersheds there will be no net increase in roads on public lands. Both the forest service and BLM manage the key watershed.

From 1997-2002 the forest service has "storm proofed" 14 miles of road. The activities included culvert replacement, road drainage improvements (water dips, water bars etc.) and planting bare soils. The objective of these activities was to reduce sediment routing, prevent future wash outs, and reduce surface erosion. Additionally, 7 miles of road have been decommissioned in the Upper Sucker Creek key watershed. Neither BLM nor the forest service have built roads in the key watershed since the enactment of the Northwest Forest Plan. Since that plan and direction contained for key watersheds, 14 miles of road have been improved and 7 miles decommissioned, resulting in a net decrease in road density and road related sediment.

Foreseeable Actions: While still in the planning phase, BLM identified, in the Althouse Sucker Landscape Management Plan, 1 mile of road to be decommissioned in the key watershed, 5 miles of decommissioning throughout the Sucker Creek watershed, and 1 mile of new construction outside the key watershed. Based on the foreseeable actions there would be a continued net decrease in roads at the watershed and key watershed scale.

The Althouse-Sucker Landscape plan is also evaluating 68 and 214 acres of harvest in section 13 and the key watershed, respectively. There are no potential timber harvest units adjacent to the proposed road or within the tributary drainage containing the proposed road construction. None

of the future potential harvest units would utilize the proposed road included in this EA. Stewardship and fuel units are proposed adjacent to the new road. As no decisions have been made the number of acres are not known at this time.

Indian Hill requested the right-of-way to provide future management options. At this time no land management proposals have been developed (personal communication Indian Hill, 12/14/07). It is therefore assumed, consistent with the RMP that the private land would be managed on a 60-year timber rotation.

The Western Oregon Plan Revisions are still in process and subject to change based on public comments and subsequent administrative remedies. They therefore provide insufficient information for meaningful consideration at this time. It is not the intent of the planning or NEPA processes to recalibrate all analyses of existing plan implementation actions whenever a new planning effort begins consideration of a broad array of management guidelines and alternative allocations at the programmatic scale. See *NAEC v. Kempthorne*, 457 F.3d 969, 979-80 (9th Cir. 2006) finding it lawful to consider the cumulative effects in the later broad-scale planning analysis.

3.1 Soils and Hydrology

3.1.1 Affected Environment

The proposed road construction is located at the end of BLM road 40-7W-13.2 in the Upper Sucker Creek key watershed. The terrain is generally steep and dissected by small tributaries draining to Sucker Creek. Average annual precipitation is approximately 62 inches. The site is located in the transient snow zone (TSZ), commonly subject to rain on snow.

Soil in the proposed road construction area is Josephine gravelly loam (48F), 35 to 55% slopes on north and east aspects. Josephine soil depth is 40 to 60" to weathered siltstone bedrock. This soil is well drained with high erosion hazard under bare soil conditions due to steep slopes.

This soil is susceptible to cutbank slumping especially on steep slopes with high cutbanks. The existing 13.2 road has one cutbank slump. However, the existing road is particularly wide resulting in a higher cutbank than a standard width road. In the first 150 feet of the proposed road there is riparian vegetation on the slope, indicating shallow ground water or wet conditions. No seeps or springs were observed during the winter within the proposed road route. The soils are stable with no indication in the project area of steep unstable conditions (sliding or mass wasting).

As indicated in the Althouse Sucker EA, percent of the 6th field subwatershed in roads is at moderate levels, roughly 2%. At this level of roading, alterations in streamflow and runoff are highly unlikely. For comparison, (Jones and Grant 1996, Jones 2000) found no statistically significant increases in peak flows attributed to roads when roads occupied 6% of the basin. Similarly, Wright et al. (1990) and Ziemer (1981), found no changes to the hydrograph when

roads occupied 5% of the basin. Harr et al (1975) found that peak flow increases were detectable when 12% of a small watershed was compacted by roads and skidroads.

3.1.2 Environmental Consequences

Alternative 1: No Action

Under the no action alternative, there would be no change to the existing soils and runoff conditions.

Alternative 2: Proposed Action

Given the moderately heavy texture (clay loam) of the subsoil atop weathered siltstone, fill slopes and probable subsurface wet spots could create conditions susceptible to slumping. If subsurface water were exposed and flowing over newly exposed soil from road construction, runoff may transport fine sediment off-site. However, PDFs prohibiting wet season operations, subsurface drainage at wet areas, seeding and mulching road slopes, rounding the cutbanks where needed and energy dissipation at the culvert outlets would greatly limit potential slumping. Further, the new road's drainage design, placement of rock, windrowed slash below the road, and energy dissipaters at culvert outlets would limit road related overland water flow and capture any routed sediment. Due to these multiple design features, chances of sediment reaching Sucker Creek over 500 feet from the road are very unlikely. Therefore, there would be no change to Sucker Creek's water quality or sediment regime.

Adding the proposed road would add to the current roaded area very slightly but ongoing federal lands management activities are reducing road miles across the watershed and in the key watershed consistent with NWFP and RMP direction.

There would be a small reduction in local soil productivity due to change of use from 0.2 acres of vegetation production to a roaded strip.

Cumulative Effects

The proposed action would add approximately 0.2 acres of road surface. Given the small addition, roaded acres in the subwatershed would essentially remain at 2% which is far below the level that research has detected measurable changes to streamflow. Due to the small area of disturbance combined with project design features there would be negligible erosion at the site and would not be transported off-site. There are no future harvest plans adjacent to the road or within the small tributary drainage containing the road. Therefore, there would be no cumulative effects from the ROW proposal to soils or water quality.

Cumulatively, past and future road reduction actions (described in watershed overview) meets the intent and objectives for key watersheds included in the NWFP which directs a net reduction in road miles. The cumulative benefit of net road reduction is also consistent with the Aquatic Conservation Strategy objectives in maintaining and restoring water quality and sediment

regimes.

3.2 Fire and Fuels

3.2.1 Affected Environment

Existing spur road 40-7-13.2 has not been used for fire suppression in recent years due to no wildfire activity. Lack of recent wildfire has increased fuel loading and fire hazard. The increased fuel hazard trend is expected to continue in the absence of wildfire or fuel reduction activities. Roads are valuable in the suppression of wildfires due to the speed firefighters can arrive on scene to keep the fires small.

3.2.2 Environmental Consequences

Alternative 1- No Action

With no action, the current trend of increasing brush and fuels would continue. There would be no direct effect to existing conditions from the no action alternative.

Alternative 2 – Proposed Action

The proposed action would add a 430 foot extension of new road to an existing spur road. The action would provide an additional 430 feet of drivable road to fire suppression personnel. In the event of a large wildfire the extra time saved could be beneficial to control the fire.

Vegetation placed on the fill slope, cut from the ROW, would not increase fuel hazard. Standing brush and understory vegetation would be piled and rowed on the ground surface. This rearrangement would reduce flame height and ladder fuels in the event of a wildfire.

Cumulative Effects

Future activities include fuel reduction treatments in section 13. Future timber harvest likewise would not add to fire hazard as post harvest fuel treatments would occur. Combined, the increase in access with future fuel reduction activities would result in a decrease in fire hazard.

3.3 Botany

3.3.1 Affected Environment

Special Status Species

BLM surveyed the proposed road site for the presence of federally-listed plants, State Listed plants, and Bureau Special Status plants during the summer of 2006. An assessment of the habitat showed the project area is not suitable habitat for Bureau Sensitive nonvascular plants. The project area is within the range of the federally-listed plant *Lomatium cookii*; however, no populations were observed during the surveys. There are no existing known sites of federally-listed, State Listed, or Bureau Sensitive botanical species in the project area.

On July 26, 2007 a new Special Status Species list went into affect (IM No. OR-2007-072). This new list has two categories, Sensitive and Strategic. The former categories of Bureau Assessment and Bureau Tracking no longer exist. Sensitive species require a pre-project clearance and management to prevent them from trending toward federal listing. There is no pre-project clearance or management required for the Strategic Species at the BLM District level, thus Strategic Species will not be analyzed in this document.

Threatened and Endangered (T&E), State Threatened (STO), and Bureau Sensitive botanical species require protection and management. It is the BLM Oregon State Office's policy that the BLM would protect, manage, and conserve those sensitive species and their habitats such that any Bureau action would not contribute to the need to list any of these species (IM OR-1991-57 and IM OR-2003-054).

Special Status Fungi

Surveys have not been conducted for Bureau Sensitive fungi, which is consistent with the BLM Oregon State Office Information Bulletin # OR-2004-145, Attachment 5. Above-ground fruiting structures (sporocarps) are short-lived, seasonal, and annually variable making surveys difficult (USDA, USDI 2000). It is expected that field units will not conduct field surveys for these species due to survey impracticality. Protection of known sites along with on-going large scale inventory work would provide the measures and means to meet agency policy.

There are 20 Sensitive fungi species that are suspected or documented on lands administered by Medford District BLM. For these 20 fungi species, specific information regarding connectivity, range, habitat requirements, and response to disturbance are lacking. The NWFP, RMP, and technical information contained in the 2004 S&M FSEIS acknowledge incomplete or unavailable information regarding these species. Given the broad habitat and the lack of surveys completed for these species, it is assumed that more sites exist in the area of the NWFP. It is unknown how rare these species really are, but it is known they are associated with common tree species (Table 18). Given the acknowledged uncertainty, the association between these species and late-successional conditions, as well as unknown information regarding connectivity, habitat needs and range is not well understood.

Table YY summarizes the known information regarding the 20 fungi. The table shows how many known sites for each species are located in the range of the NWFP, how many of the sites are in reserves, and the forest communities where these species may be found. The fifth column summarizes the likelihood of occurrence in the Medford District, which can assist in conservation planning (USDA/USDI Interagency Special Status and Sensitive Species program website).

Table YY: Sensitive Fungi Location, and Forest Community Components in the Medford District					
Scientific Name	Sites in NWFP¹	Sites in Reserves² (%)	Forest Community Component	Likelihood of Occurrence and Risk to Species	Known Sites in the Sucker Creek 5th

					Field Watersheds
<i>Boletus pulcherrimus</i>	36	5 (14%)	PSME, PIPO, ABCO	Low likelihood of occurrence; low risk to species viability	None
<i>Dermocybe humboldtensis</i>	4	1 (25%)	PSME, PIPO	Low likelihood of occurrence; low risk to species viability	None
<i>Gastroboletus vividus</i>	4	2 (50%)	ABCO, Pine	Low likelihood of occurrence; low risk to species viability	None
<i>Gomphus kauffmanii</i>	75	Unknown	Unknown	Unknown	None
<i>Gymnomyces fragrans</i>	2	Unknown	Unknown	Unknown	None
<i>Hevella crassitunicata</i>	27	Unknown	Unknown	Unknown	None
<i>Leucogaster citrinus</i>	52	Unknown	Unknown	Unknown	None
<i>Otidia smithii</i>	10	Unknown	Unknown	Unknown	None
<i>Phaeocollybia californica</i>	30	5 (17%)	PSME	Reasonable likelihood of occurrence; low risk to species viability	None
<i>Phaeocollybia olivacea</i>	93	19 (20%)	PSME, ABCO, QUKE, Pine	Reasonable likelihood of occurrence; low risk to species viability	None
<i>Phaeocollybia oregonensis</i>	11	5 (46%)	ABCO	Low likelihood of occurrence; low risk to species viability	None
<i>Phaeocollybia pseudofestivia</i>	49	Unknown	Unknown	Unknown	None
<i>Ramaria largentii</i>	20	Unknown	Unknown	Unknown	None
<i>Ramaria spinulosa</i> var. <i>diminutiva</i>	1	0	PSME, Pine	Low likelihood of occurrence; low risk to species viability	None
<i>Rhizopogon chamaleontinus</i>	1	0	PSME	Reasonable likelihood of occurrence; low risk to species viability	None
<i>Rhizopogon clavitisporus</i>	Unknown	Unknown	Unknown	Unknown	Unknown
<i>Rhizopogon elliposporus</i>	3	0	PSME	Reasonable likelihood of occurrence; low risk to species viability	None
<i>Rhizopogon exiguus</i>	5	3 (60%)	PSME	Reasonable likelihood of occurrence; low risk to species viability	None
<i>Sowerbyella</i>	57	Unknown	Unknown	Unknown	None

<i>rhenana</i>					
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¹ Source: ISMS database 11-20-04, Handbook to Strategy 1 Fungal Species in the NWFP, Handbook to Additional Fungal Species of Special Concern in the NWFP, Medford District data.

² Reserves = Land Use Allocations, such as Late Successional Reserve and Congressionally Reserved areas.

Bold species = occurs on or within Medford District.

Acronyms: PSME = Douglas-fir, forest community component; PIPO = Ponderosa pine, forest community component, ABCO = White fir, forest community component; QUKE = California black oak, forest community component; Pine = Pinaceae family (includes pine, fir, Douglas-fir, spruce, hemlock), forest community component.

3.3.2 Environmental Consequences

Alternative 1—No Action

The No Action Alternative would not result in any direct or indirect effects to T&E, Bureau Sensitive, or State Threatened botanical species because this alternative proposes no habitat/ground-disturbing activities and none of these species are present in the project area. Therefore, the no action alternative would have no affect on the T&E species *Lomatium cookii* or impact State Threatened botanical species. Additionally, this alternative would not trend toward listing Bureau Sensitive species.

Alternative 2 – Proposed Action

Special Status Vascular and Non Vascular Species

Alternative 2 would not result in any direct effects to T&E, Bureau Sensitive, or State Threatened botanical species because none of these species are present in the project area. Therefore, Alternative 2 would have no affect on the T&E species *Lomatium cookii* or impact State Threatened botanical species. Additionally, this alternative would not trend toward listing Bureau Sensitive species.

Sensitive Fungi Species

This alternative proposes to build approximately 430 feet of road with a 45 foot clearing width. This is approximately 0.5 acre of new disturbance.

Dahlberg and Stenlid (1995) found that ectomycchorizal mycelia networks may range in size from 1.5 to 27 meters (5 to 89 feet). Given the potentially small range of mycelia networks, the ground-disturbing road building may fragment the mycelia network, reducing or eliminating local populations if Sensitive Fungi are present in the disturbed area. However, given there are no known sites of Bureau Sensitive fungi in the 5th field watershed and given the small percentage of ground disturbance, loss of local populations is not likely. i.e. the probability of adverse effects is low given the scale.

Cumulative Effects

The analysis area for cumulative effects for Special Status vascular and non-vascular plants is the Medford District. The analysis area for Special Status fungi is the Sucker Creek 5th field Watershed.

As human populations increase in this region, available habitat for botanical species would decrease as suitable habitat is developed for other uses. It is assumed that land management would continue on private land on a rotational basis. Current and future projects proposed on the Medford BLM District would incorporate PDFs designed to protect habitat and species.

Special Status Vascular and Non-Vascular Plants

As there are no T&E listed plants, State listed plants or Bureau Sensitive botanical species (including fungi), this project would not create any cumulative impacts to those species. On BLM lands within the analysis area plant and fungi species would continue to be protected and conserved following policy and management guidelines. Populations on non-federal lands would most likely remain undetected and unprotected because no laws governing rare plants on non-federal lands exist. The Althouse Sucker project will implement protective measures, such as buffers and seasonal restrictions, to prevent project activities from impacting Special Status species. Similar protective measures are used throughout the Grants Pass Resource Area and the Medford District. Because there are no project specific effects, this project will not contribute to any cumulative effects on Special Status plants or fungi.

3.4 Noxious Weeds

3.4.1 Affected Environment

BLM surveys found one noxious weed species in the project area. Himalayan blackberry is located along the existing road that Indian Hill would like to use as a Right-of-way. Himalayan blackberry (*Rubus discolor*) is a perennial bramble introduced from Western Europe that forms large impenetrable thickets of prickly canes. It colonizes disturbed sites including waste areas, pastures, forest plantations, roadsides, and waterways. Detrimental effects include displacement of native species, decrease of plant diversity, reduced forage, inaccessibility by humans and animals. Successful control methods include mechanical, prescribed burning, and chemical.

Noxious weeds can out-compete native species for light, space, water, and nutrients. They can alter soil fertility, dry up water supplies, poison animals, decrease agriculture production, infest rivers, and reduce recreational value. Noxious weeds find disturbed sites favorable for establishment and spread. Vehicles are a primary method for transporting noxious weeds and creating new populations of noxious weeds. On private land and throughout the watershed, the rate of weed spread is not possible to quantify, as it depends on many factors including, but not limited to, logging on private lands, motor vehicle traffic, recreation use, rural and urban development, and natural processes, such as wind, seasonal flooding, and animal migration patterns.

3.4.2 Environmental Consequences

Alternative 1—No Action

The No Action Alternative would not create additional disturbed areas or access points that may result in new weed populations. The existing road would continue to be blocked to vehicle

traffic.

Alternative 2

Equipment mobilization and road construction represent opportunities for dispersal of noxious weed seed from outside the project area, as well as the spread of existing seed present in the project area. Consistent with the RMP EIS (p. 4-41, 42), project activities could cause noxious weeds to spread or become established in the project area through seed or plant transport due to road work. However, due to PDFs designed to reduce the risk of weed spread (equipment washing to remove dirt containing weed seeds or plants, seeding/mulching with native species to help native plants become established more quickly), increases in weed populations would be equal among the alternatives and are not anticipated to be distinguishable above current levels and mechanisms (vehicles, wind, animals, etc.). The use of straw is not anticipated to increase the spread of noxious weeds because straw used for mulch would be from native species and weed free. Additionally the proposed blocking of the road after use by Indian Hill would eliminate continued access to the road and further reduce the risk of weed introduction via vehicles. The PDFs for reducing or eliminating noxious weed impacts are widely accepted and utilized as standard operating procedures for the control of noxious weed control across the nation (USDI 2007, pg. 2-26).

Cumulative Effects

The analysis area for cumulative effects on noxious weeds is the Sucker Creek 5th field Watershed. This analysis area was chosen because transportation system use, which is present across the watershed, is typically how noxious weeds spread.

To address the cumulative effects of the proposed actions on the spread of noxious weed encroachment, the conditions on nonfederal lands must be considered. However, there is no available or existing data regarding noxious weed occurrences on local non-federal lands. Therefore, for purposes of this analysis, BLM assumes that: 1) there is a source of noxious weeds on non-federal lands that can spread to federal lands, especially when the land ownership is checkerboard, as within the watershed; and 2) conversely, that noxious weeds are not established in these lands. Under either assumption, there is an equal need to reduce the risk of spread of noxious weeds from the federal lands to the adjoining non-federal lands. Seeds are spread by the wind, animal/avian vectors, natural events, and human activities. Additional human disturbance and traffic would increase the potential for spreading noxious weeds, but regardless of human activity, spread of these weeds would continue through natural forces. Thus, the BLM cannot stop the spread of noxious weeds from non-federal lands; it might only reduce the risk or rate of spread and control of known populations.

PDFs for washing equipment and seeding with native material are standard for all BLM activities including Indian Hill's proposal and the foreseeable Althouse Sucker project; thus, proposed foreseeable activities on BLM land would not affect noxious weeds. It is assumed that private lands would be entered on a 60 to 80-year rotational basis, providing opportunities for weed spread and establishment. Foreseeable activities that have the potential to spread weeds, such as motor vehicle traffic, development, recreational use including OHVs, and road construction are

expected to continue or increase. These types of activities could result in new disturbed sites available for noxious weed establishment. This possibility of introduction of new noxious weeds is similar for the No Action and Action Alternatives.

Given unpredictable vectors for weed spread, such as vehicle usage by private parties, wildlife behavior, and wind currents, it is not possible to quantify with any degree of confidence the rate of weed spread in the future, or even the degree by which that potential would be increased by the proposed actions. However, the proposed action inclusive of PDFs would minimize the spread of noxious weeds, and treatments included in the Althouse Sucker landscape management plan would reduce existing weed populations.

3.5 Fisheries

3.5.1 Affected Environment

The proposed road is located mid-slope outside of Riparian Reserves. The road crosses neither a perennial nor an intermittent stream. The road is approximately 0.1 mile from Sucker Creek. The existing BLM 40-7-13.2A road crosses an unnamed non-fish bearing intermittent stream, at approximately mile post 0.1. The intermittent stream is a tributary to Sucker Creek.

The proposed road is within a designated Tier 1/Key watershed, the Upper Sucker Creek 6th field watershed (RMP EIS pg. 23). Key watersheds serve as refugia that are crucial for maintaining and recovering habitat for at-risk stocks of anadromous salmonids and resident fish species. They have the highest priority for restoration (NFP pg. C-7). Fish habitat restoration activities are ongoing in the Upper Sucker Creek watershed on BLM, USFS and private lands. Locations identified as having the greatest potential for improvement through instream placement of large wood in Sucker Creek include T40S, R7W, sections 1, 12, and 13 (BLM 2007).

Anadromous fish species present within the Upper Sucker Creek 6th field watershed include coho salmon (*Oncorhynchus kisutch*), fall chinook salmon (*O. tshawytscha*), and winter steelhead (*O. mykiss*), and Pacific lamprey (*Lampetra tridentata*). Resident cutthroat trout (*O. clarki*), rainbow trout (*O. mykiss*), and native sculpin (*Cottidae spp.*) are distributed throughout many tributary reaches above and below anadromous fish barriers.

Coho salmon within the Sucker Creek watershed are part of the Southern OR/Northern CA (SONC) Coho ESU (Evolutionarily Significant Unit), which was listed as threatened on May 6, 1997 (Fed. Reg./Vol. 62, No. 87).

Upper Sucker Creek stream temperature data monitored by the BLM (1998-2004) in T40S-R7W-Sec1 indicates a 7-day average daily maximum temperature of approximately 66°F, occurring in late July to mid August (BLM 2007). Habitat surveys conducted by BLM (2004) in Upper Sucker Creek (T40S- R7W-Sec1) found undesirable numbers for large wood pieces and complex pools.

3.5.2 Environmental Consequences

Alternative 1 – No Action

Under the no action alternative, fish and aquatic habitat would remain in their present conditions and trends.

Alternative 2

Sediment production is highly unlikely (See Soils Hydrology Section X.X). Additionally, routing mechanisms (i.e. streams) for sediment to transport to fish habitat are not present. PDF's are incorporated into the project proposal to eliminate the creation of new mechanisms. Specifically, the first 150 feet of the road would be full bench construction with an insloped road prism and inside ditch; ditch relief culverts (18" diameter) would be installed to reduce surface water volume and velocities; riprap energy dissipaters would be installed at culvert cross drain outlets to prevent erosion; and subsurface drains would be installed if subsurface water is encountered. Additionally, spot rock installation 50 foot each side of the culvert crossing at mile post 0.1 of road 40-7-13.02A would be installed to reduce sediment input into the intermittent non-fish bearing stream.

The proposed road is outside of Riparian Reserves; therefore, no effect to stream shade and large wood recruitment is expected to occur. Additionally, there are no causal mechanisms present to transport sediment to fish and aquatic habitat. No effects to fisheries or aquatic resources are anticipated from the proposed action. This determination includes short and long term, direct and indirect, and cumulative effects.

Cumulative Effects

No cumulative adverse affects from the proposed road construction are anticipated

The foreseeable Althouse Sucker Landscape Management Plan is evaluating potential fuel reduction activities near the proposed road. There are no proposals to create roads to conduct fuel treatments. Further fuel treatments retain a mosaic of vegetation. Therefore there would be no interactions between the projects that would lead to erosion and sediment transport to fish habitat.

Based on the analysis of potential impacts, the proposed action would not disrupt normal behavior patterns such as migration, spawning, egg incubation, rearing and feeding. Since there are no cumulative effects at the site level, there would be no cumulative effects at 5th or 6th field scale.

3.5 Wildlife

Only Special Status Species (Federally Listed, Federal Candidate, and Bureau Sensitive wildlife species) known or suspected to be present within the project area or adjacent BLM lands and

potentially impacted by the proposed actions are addressed in this EA.

3.5.1 Affected Environment

Northern Spotted Owl (Federally Threatened)

Spotted owls are closely associated with older forests for nesting, foraging, and roosting throughout most of their range (Forsman et al. 1984; Carey et al. 1990; and Solis and Gutierrez 1990). Spotted owl habitat within the Sucker Creek 5th field watershed was typed utilizing the McKelvey rating system. Suitable spotted owl nesting, roosting, and foraging habitat (NRF) is characterized by forested stands with older forest structure, multiple canopy layers, and a canopy closure of 60 percent or greater. The best quality NRF habitat has large old trees with cavities, broken tops or mistletoe platforms, large branches, dead standing and fallen decayed trees, and multiple canopies of shade tolerant hardwoods and conifers that support prey base. NRF habitat can also function as dispersal habitat. Dispersal-only habitat for spotted owls is defined as stands that have a canopy closure of 40 percent or greater and provides cover, food, and protection on a temporary basis to non-nesting owls moving between patches of NRF habitat (USDI, 2006).

The proposed road construction on BLM is in spotted owl dispersal-only habitat. There are approximately 147 acres suitable spotted owl NRF habitat located on BLM land in adjacent sections 12 and 13. The nearest historic spotted owl site is approximately 1.5 miles from the project area.

Fisher (Federal Candidate)

Fishers are associated with low to mid-elevation forests with a coniferous component, large snags or decadent live trees, large fallen trees for denning and resting, and complex physical structure near the forest floor, which provide habitat for fisher prey (Aubry and Lewis 2003). Suitable spotted owl NRF habitat also adequately describes suitable fisher denning and resting habitat because there is a direct correlation of key habitat features captured in the rating system and fisher habitat (high canopy cover, multi-storied stands, large snags, and large down trees on the forest floor). The proposed road construction on BLM is not located in suitable denning and resting fisher habitat, but could serve as foraging and dispersal habitat. Powell and Zielinski (1994) and Zielinski et al. (2004) suggest that habitat suitable for denning and resting sites may be more limiting for fishers than foraging habitat.

Forest carnivore surveys using bait stations with motion and infrared detection cameras have been conducted throughout the Grants Pass Resource Area and have detected fishers in the vicinity of Williams, the top of the Deer Creek drainage, and near Galice Creek. Surveys have also been conducted in the Sucker Creek watershed (T40S-R7W-Sections 13 and 15), but no fishers were detected. Even though fishers were not detected, fishers are suspected to occur within the watershed due to the detections of fishers in the adjacent watershed. The nearest known fisher location on BLM is approximately 8 miles northeast of the proposed action.

Additional Wildlife

Down logs and snags are present within the proposed road route that may provide habitat for some special status species and land birds (neotropical birds and year round residents). Land

birds use a wide variety of habitats, including late-successional forests, riparian areas, brush in recovering clear-cuts, and small trees in developing stands.

3.5.2 Environmental Consequences

Alternative 1: No Action

Stand conditions along the proposed road route would remain the same and no habitat modifications would occur. There would be no effects to special status wildlife species or their habitats.

Alternative 2: Proposed Action

Northern Spotted Owl (Federally Threatened)

The proposed road construction on this route would remove 0.5 acres of spotted owl dispersal only habitat. However, this impact would be negligible because the surrounding BLM 15 acre stand would continue to function as dispersal habitat. The proposed action would not preclude owls from nesting in nearby suitable NRF stands on BLM land and dispersing within the watershed. Additionally, seasonal restrictions listed as Project Design Features would prevent disturbance to potential adjacent nesting spotted owls.

Fisher (Federal Candidate)

Approximately 0.5 acres of fisher foraging and dispersal habitat would be removed as a result of the proposed action. However, the loss of habitat from the proposed action would be negligible and would not preclude fishers from using the adjacent BLM lands. Project activity disturbance effects to fishers are not well known. Fishers may avoid roaded areas (Harris and Ogan 1997) and humans (Douglas and Strickland 1987; Powell 1993). Disturbance from the proposed action would be temporally and geographically limited. Fishers have large home ranges and would be able to move away from the action area while the disturbance is occurring, without impacting their ability to forage and disperse within their home range. The proposed action would not contribute to the need to federally list the fisher as threatened or endangered. Habitat features, such as large snags and coarse wood, as well as untreated late-successional forest habitat, would be retained in the adjacent BLM stands and would continue to provide denning and resting habitat within the Sucker Creek 5th field watershed.

Additional Wildlife

The proposed action would remove approximately 0.5 acres of potential habitat (conifers, hardwoods, brush, snags, and coarse woody material) for neotropical birds. However, this loss would be negligible due to the large amounts of suitable habitat retained on adjacent BLM land. Some individuals may be displaced during project activities. However, untreated adjacent BLM lands would provide refuge and nesting habitat, which would help minimize short term loss of habitat and temporary displacement during project activities. Additionally, the failure or loss of a nest during one nesting season would not be expected to reduce the persistence of any bird species in the watershed due to the small scope of the project.

Road construction could cause warmer, drier conditions in adjacent interior forest habitats

because of reduction of the canopy closure and increased solar and wind exposure (Trombulak and Frissell 2000). This could result in reduced reproduction and survival of species with low dispersal capabilities, such as mollusks and possibly amphibians (Marsh and Beckman 2004). Species with greater dispersal capabilities could likely move to areas with more favorable microclimate conditions if suitable habitat were nearby. However, due to the small scope of this project, only negligible or undetectable effects to Bureau special status species are expected. The road construction is not expected to affect long term population viability of any known species or lead to the need to list sensitive wildlife species due to minimal habitat loss and the abundance of habitat nearby.

Cumulative Effects

Cumulative effects for wildlife species and habitat are primarily discussed at the 5th field watershed in order to capture the varying habitats, species home ranges, and varying degrees of species mobility. Fire suppression, road building, and timber harvest throughout the Sucker Creek 5th field watershed have resulted in habitat loss and fragmentation, and have changed the distribution and abundance of many wildlife species in the Sucker Creek 5th field watersheds.

The BLM is also planning the Althouse-Sucker landscape plan which is examining potential timber harvest on 1100 acres within the Sucker Creek 5th field watershed. There would be no timber harvest adjacent to the proposed road and therefore, lands adjacent to the road would continue to function as dispersal habitat. It is assumed that private land would be harvested on a 60-year rotation (RMP EIS p. 4-5) and would be maintained in early to mid-seral habitat.

At the 5th field watershed level, late-successional forest habitat would be maintained throughout the Sucker Creek 5th field Watersheds in Riparian Reserves, 100-acre KSOACs, 15% late-successional forest retention, and in the East IV/Williams-Deer LSR. These reserve areas would continue to provide suitable habitat for late-successional forest habitat dependent species and would help maintain future connectivity throughout the watersheds and between large Late Successional Reserves.

Even when the proposed road construction is added with the future foreseeable actions, it is unlikely the road construction would reduce or diminish the survival or recovery of the spotted owl, due to the small percentage of habitat affected compared to the provincial and the range-wide levels. The 0.5 acres of dispersal habitat removal represents 0.01% of the available dispersal habitat available on BLM lands. Approximately 3,833 acres of dispersal-only habitat would be retained within the surrounding Althouse-Sucker BLM project area and would continue to provide suitable dispersal habitat. These untreated areas would continue to facilitate owl dispersal within and throughout the watershed, reducing the impacts from these two projects. Suitable dispersal habitat would also be found in untreated suitable NRF habitat within the project area. Further, recent road decommissioning in the watershed and key watershed reduces impacts to wildlife.

Even though the proposed actions may potentially disrupt local individuals if present during the days of activity and remove 0.5 acres of habitat, this project is not expected to affect long-term population viability of any Bureau Sensitive wildlife species or land birds known to be in the

area. Due to the small scope of the project and abundant similar habitat found throughout the watershed, this project combined with other actions in the watershed would not contribute to the need to federally list any Bureau Sensitive wildlife species.

4.0 Agencies and Persons Consulted

BLM sent scoping letters to 45 scoping letters to agencies, nearby residents and interested public. BLM consulted with the USFWS regarding project activities. BLM received one scoping response.

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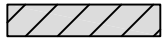
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Appendix A - Map

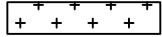
LEGEND



U.S. LAND



U.S. LAND UNDER M-1166 AGREEMENT



PERMITTEE LAND



U.S. ROADS ACROSS U.S. LAND ADD TO SCHEDULE 1 M-1166



SEGMENT BREAK

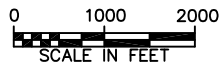


EXHIBIT C
AMENDMENT NO. 13
M-1166 (OR 56811FD)
INDIAN HILL, LLC
DATE: 12-17-2007

